AX10432 User's Manual

PC/104 Flat Panel and CRT Display Module

I. Introduction

The AX10432 is a high performance flat panel/CRT display module with an universal PC/104 form factor control module.

II. Features

- Fully compatible with IBM VGA
- Displays flat panel and CRT monitor simultaneously
- Onboard built-in 1MB VGA RAM
- Supports panel resolutions of 1024 x 768 (mono), 800 x 600 (Hi-color), and 640 x 480 (Hi-color)
- Supports non-interlaced CRT monitors with resolutions of up to 1024 x 768-256 colors
- Hi-color display capability with flat panels and CRT monitors up to 800 x 600 resolution
- Direct interface to Color and Monochrome Dual Drive and Single Drive panels

III. Software Utilties Supported

- BIOS Customization Utility
- Power Management Utility
- Panel Switching Utility (including service code)
- BIOS Update Utility

Before Updating your BIOS on Section X of this User's Manual, please refer to the readme.txt file contained in the Driver & Utility diskette. The file contains the step-by-step intallation/BIOS update procedures.

IV. Software Drivers Supported

- Windows 3.1
- Windows 95
- Windows 98
- Windows NT3.51
- Windows NT4.0

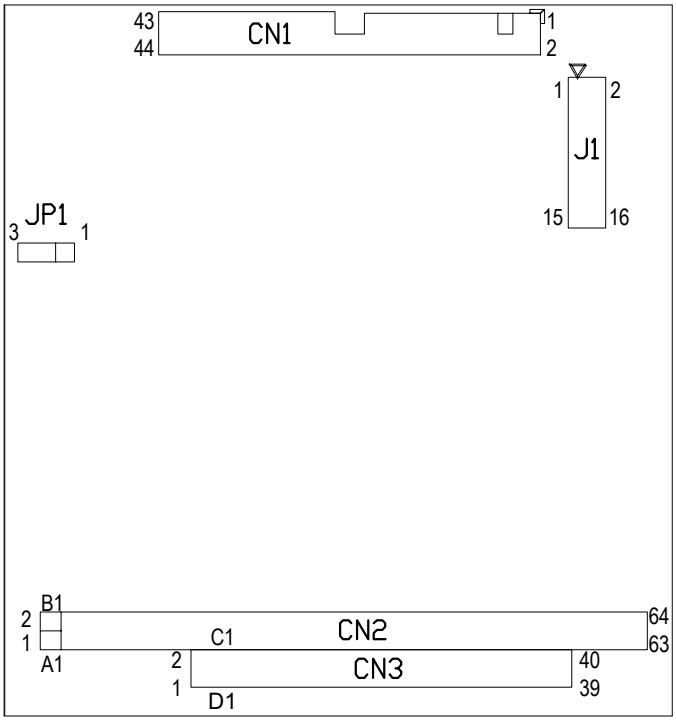
V. Checklist

- ✓ AX10432 PC/104 Module x 1
- ✓ Driver & Utility diskette x 2
- ✓ CRT connection adapter x 1
- ✓ Screws (3mm) x 4
- ✓ Bronze stiandoff (6mm) x 4
- ✓ User's manual x 1

If there are damaged or missing parts, contact your supplier and/or dealer immediately. Do not attempt to apply power to the module if there is damage to any of its components.

©Copyright 2000 AXIOM Technology Co., Ltd.
Version A1 October 2000
Printed in Taiwan

VI. Placement



VII. Jumper Setting

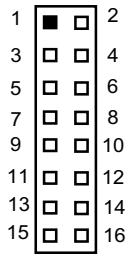
JP1 : BIOS MODE Select

BIOS MODE	JP1 Setting
WRITE-ENABLE	Short 1-2
WRITE-PROTECT(default)	Short 2-3

VIII. Connector Pin Assignments

J1: CRT Connector Pin Assignment

Pin	Signal	Pin	Signal	Pin	Signal
1	Red	2	AGND	3	Green
4	N/A	5	Blue	6	AGND
7	N/A	8	N/A	9	GND
10	AGND	11	GND	12	Horizontal Sync
13	N/A	14	Vertical Sync	15	N/A
16	N/A				



©Copyright 2000 AXIOM Technology Co., Ltd.
Version A1 October 2000
Printed in Taiwan

CN1: Flat Panel Connector Pin Assignment

Pin	Description	Pin	Description	Pin	Description
1	N/A	2	+12VM	3	GND
4	GND	5	VDDM	6	VDDM
7	ENAVEE	8	GND	9	P0
10	P1	11	P2	12	P3
13	P4	14	P5	15	P6
16	P7	17	P8	18	P9
19	P10	20	P11	21	P12
22	P13	23	P14	24	P15
25	P16	26	P17	27	P18
28	P19	29	P20	30	P21
31	P22	32	P23	33	GND
34	GND	35	SHFCLK	36	FLM
37	M	38	LP	39	GND
40	ENABKL	41	GND	42	-SHFCLK
43	VDDM	44	VDDM		

Flat Panel Connector Pin Description

Name	Description
P0~P23	Flat panel data output
ENABKL	Activity Indicator and Enable Backlight outputs
SHFCLK	Shift clock. Pixel clock for flat panel data
M	M signal for panel AC drive control
LP	Latch pulse. Flat panel equivalent of HSYNC
FLM	First line marker. Flat panel equivalent of VSYNC
+12VM	+12V power controlled by chipset
ENAVEE	Power sequencing controls for panel LCD bias volt
VDDM	5V

IX. Flat Panel Interface Table

CN1 Pin No.	Pin Name	Mono LCD	Color LCD	Color LCD*	Color LCD	Color LCD	Color LCD	Gray	Gray
		Dual-scan STN	Single-scan STN	Dual-scan STN	Dual-scan STN	TFT	TFT	PLASM	EL
		8-bit	16-bit	8-bit	16-bit	9/12/16-bit	18/24-bit	8-bit	8-bit
35	SHFCLK	SCLK	CL2	CL2	CL2	DCLK	DCLK	CLK	VCLK
38	LP	LCLK	CL1	CL1	CL1	LP/HS	LP/HS	HSYNC	HS
36	FLM	FLM	FLM	FLM	FLM	FLM/VS	FLM/VS	VSYNC	VS
37	M	MDL	M	M	M	DE	DE	DISPTMG	DE
9	P0	UD3	SUD7	SUD7	SUD7	B0	B0		
10	P1	UD2	SUD6	SUD6	SUD6	B1	B1		
11	P2	UD1	SUD5	SUD5	SUD5	B2	B2		
12	P3	UD0	SUD4	SUD4	SUD4	B3	B3		
13	P4	LD3	SUD3	SUD3	SLD7	B4	B4		
14	P5	LD2	SUD2	SUD2	SLD6	G0	B5		
15	P6	LD1	SUD1	SUD1	SLD5	G1	B6		
16	P7	LD0	SUD0	SUD0	SLD4	G2	B7		
17	P8		SLD7		SUD3	G3	G0	OD3	OD3

Continued . . . . .

©Copyright 2000 AXIOM Technology Co., Ltd.
Version A1 October 2000
Printed in Taiwan

CN1 Pin No.	Pin Name	Mono LCD	Color LCD	Color LCD*	Color LCD	Color LCD	Color LCD	Gray	Gray
		Dual-scan STN	Single-scan STN	Dual-scan STN	Dual-scan STN	TFT	TFT	PLASM	EL
		8-bit	16-bit	8-bit	16-bit	9/12/16-bit	18/24-bit	8-bit	8-bit
18	P9		SLD6		SUD2	G4	G1	OD2	OD2
19	P10		SLD5		SUD1	G5	G2	OD1	OD1
20	P11		SLD4		SUD0	R0	G3	OD0	OD0
21	P12		SLD3		SLD3	R1	G4	ED3	ED3
22	P13		SLD2		SLD2	R2	G5	ED2	ED2
23	P14		SLD1		SLD1	R3	G6	ED1	ED1
24	P15		SLD0		SLD0	R4	G7	ED0	ED0
25	P16						R0		
26	P17						R1		
27	P18						R2		
28	P19						R3		
29	P20						R4		
30	P21						R5		
31	P22						R6		
32	P23						R7		

** : Color Dual-scan STN LCD Panel with external frame buffer*

X. How to Update VGA BIOS

This display module has 32K bytes ROM BIOS saved in 29EE010 Flash EPROM. So if user has different types of flat panel there is an utility program, NEWVGA.EXE, provided to update the VGA BIOS code. JP1 is used to select Flash EPROM in write-protect or write-enable mode. Shorting pins 1&2 of JP1 enables update state, and write-enabling the Flash EPROM. Shorting pins 2&3 sets it to normal mode, and write-protecting the Flash EPROM. The utility command format is:

1) UNLOCK [press enter]

2) NEWVGA [filename] [press enter]

To update NEWBIOS:

A) Turn power off.

B) Set JP1 jump to 1-2.

C) Turn power on.

D) Entry DOS and type command.

E) New BIOS update completed and system will be reboot.

F) Turn power off.

G) Set JP1 jump to 2-3.

CAUTION:

(1) This utility, in run-time, will be using the memory range C000:8000 to C000:FFFF. Please avoid this memory range.

(2) Please make sure that the JP1 is short to 2-3 in normal mode.

©Copyright 2000 AXIOM Technology Co., Ltd.
Version A1 October 2000
Printed in Taiwan